

# NUCLEAR DIVISION NEWS

UNION  
CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 1 — No. 15

OAK RIDGE, TENNESSEE

Thursday, August 27, 1970



**BOND DRIVE IN SWING**—Irene Householder, left, and Donna Johnston, Central Payroll, begin the task of sorting bond cards. Addressograph plates are made for each bond-buyer if his bonds are to be mailed home.

## Paducah's FIT Program Starts 2 New Courses

Forty-four more trainees have begun classes at the Paducah Gaseous Diffusion Plant in the Functional Industrial Training (FIT) Project, a manpower-training program for disadvantaged in the Paducah, Ky., area. These include 24 trainees in instrument repair and 20 in welding.

The courses, which include both classroom and shop instruction, provide training in basic skills and techniques required for entry-level jobs in industry.

The program is similar to the Training and Technology (TAT) Program which is conducted at Y-12.

Training in instrument repair covers installation, repair, maintenance, and adjusting of indicating, recording, and controlling instruments used to measure and control process variables. Both pneumatic and electronic instrumentation are surveyed in the 50-week course.

### More Due in November

The 20-week welding course includes reading and interpretation of fabrication prints for piping and structural work which is a basic requirement for arc welding, oxygen-acetylene welding, and cutting. Trainees will be expected to master the art of cutting, grinding, joint preparation, control of distortion, and applications of metallic arc beads on plate and pipe joints in the four standard welding positions. Graduates will be qualified for the ASME Pressure Vessel Code Tests.

In all, 64 trainees are now enrolled in FIT, including a class of 20 drafting trainees which was started in June. In November, another group of 15-20 trainees will begin a second welding training

(Continued on Page 6)

## Payroll Deductions

## 1500 More Buy Savings Bonds

Almost 1,500 more Nuclear Division employees have already signed up for the purchase of U. S. Savings Bonds under the payroll savings plan.

Preliminary figures were announced by W. E. Williams, general chairman of the month-long campaign which will end on August 31. Williams said that on the basis of these preliminary figures, he was very optimistic about the prospects for a highly successful campaign.

Prior to the start of the campaign, less than 700 employees at the Oak Ridge facilities were investing in bonds through payroll savings. On the basis of preliminary figures (through August 19), 1,495 more persons have signed up for the program, bringing participation at this stage of the campaign to 2,174.

The breakdown by facility is as follows: Oak Ridge Y-12 Plant, 893; Oak Ridge Gaseous Diffusion Plant, 582; Oak Ridge National Laboratory, 530; and General Staff, 169.

Williams emphasized that these figures were preliminary and hoped that even greater participation would be realized by the time the drive ends next week.

All employees have received "Payroll Savings Authorization Cards," together with a fact sheet

pointing out the advantages of payroll savings. When filling out the card, employees need to indicate the amount of money they want to invest in Savings Bonds. Participation requires a minimum investment of 50 cents a week or two dollars a month.

The current investment rate on U. S. Savings Bonds is five percent if the bonds are kept for five years, 10 months. In addition, savings bond interest is not subject to state or local income taxes. In addition, participants have the privilege of continuing to hold their E Bonds at interest for 10 years beyond maturity.

Participation in the payroll savings plan is automatic. Once an employee decides how much he wants to invest, the bonds start accumulating automatically. However, in the event of an emergency, the bonds can be cashed readily at any bank.

Heading up the savings bond drive at the various Oak Ridge facilities are: L. A. Studinger, Oak Ridge Gaseous Diffusion Plant; Edward A. Pluhar, Oak Ridge Y-12 Plant; Hezz Stringfield, Oak Ridge National Laboratory; and Guy Tucker, General Staff.

## Readership Survey

The last issue of Nuclear Division News carried a readership survey. Many employees have submitted the completed form, making constructive suggestions to make the News a better publication.

It isn't too late to get your comments and answers back to the News. Your name is not required. The more, however, who fill out the questionnaire, the more useful the survey can be. Is your survey in?

## Labor Day

**Monday, September 7, is an official holiday for Nuclear Division employees. The nation pauses to honor its working forces in the oldest official holiday in the country, LABOR DAY.**

**No employee is required to be at work unless his presence is necessary for continuous operation or security of the plants.**

## Carbide, Others Join to Study Molten Salt Reactor Potential

Union Carbide, five other industrial companies, and 15 electric utilities have formed an independent group to evaluate molten salt reactor technology and assess its potential for commercial nuclear power.

The study group, called the "Molten Salt Group," began work August 10, according to Leonard F. C. Reichle, Vice President, Ebasco Services, Inc., which will serve as coordinator and technical director for the group. The evaluation is expected to be completed in about six months.

The group will study Oak Ridge National Laboratory's molten salt development program, existing design systems, and alternate concepts. Topics to be covered include the feasibility of breeding additional nuclear fuel through the thorium-uranium-233 cycle and of using as a fuel the plutonium that will soon become available in great quantity from present-day water-type reactors.

The purpose of the study is to make an independent and objective technical appraisal of molten salt reactor technology and to assess its potential in developing a reliable, safe and low-cost heat source for large central station power plants.

### Others Involved

Union Carbide will be represented in the group by R. N. Bushong, assistant to the director of Advanced Technology Projects of the Carbon Products Division, with over 30 years experience with the technology of carbon,

graphite, and related high-temperature materials.

The project will be under the management and technical direction of Dr. Deslonde de Boisblanc, Ebasco's chief consulting nuclear engineer and manager of research and development, who conceptually designed the Advanced Test Reactor for the Atomic Energy Commission and who currently is a member of the AEC's Advisory Committee on Reactor Physics.

Other industrial companies and representatives in the Molten Salt Group are Babcock and Wilcox Co., Bernard J. Goulding, supervisor of mechanical design in the company's Nuclear Power Generation Department; Byron-Jackson Pump Division of Borg Warner Corp., Gary Clasby, project engineer on the "Large Sodium Pump Design Study," which was performed for the AEC; Continental Oil Co., Dr. J. A. Acciarri, a supervising research scientist from CONOCO's Research Laboratories; and the Stellite Division of the Cabot Corp., T. K. Roche, co-inventor of INOR-8 (Hastelloy-N) and with 14 years experience in ORNL's Metallurgy Division.

### Planning by Ebasco

The electric utility industry is represented by Dallas Power and Light Co.; Houston Lighting and Power Co.; Kansas Gas and Electric Co.; Middle South Services, Inc. (on behalf of Arkansas Power and Light Co., Louisiana Power and Light Co., Mississippi Power and Light Co., and New Orleans Public Service, Inc.); Minnesota Power and Light Co.; Northeast Utilities Service Co. (on behalf of Connecticut Light and Power Co., Hartford Electric Light Co., Holyoke Water Power Co., and Western Massachusetts Electric Co.); Texas Electric Service Co.; Texas Power and Light Co.; and Union Electric Co.

In general, Ebasco will provide overall program planning and coordination; industrial participants will perform technical evaluations and analyses; and electric utilities will provide information on plant operation, maintenance, reliability, safety, and economic requirements.

The group will utilize data on physics and thermal, hydraulic, and similar features developed at ORNL, as well as ORNL's previous work on the Molten Salt Reactor Equipment and the 1,000 MWe Molten Salt Breeder Reactor conceptual design study.

## Carbide Sells Subsidiary Englander Bedding Firm

The Englander Company, a wholly-owned subsidiary of Union Carbide Corporation, has been sold to the United States Bedding Company.

The bedding products firm will combine with U. S. Bedding's King Koil Sleep Products subsidiary to produce and market product lines under their own particular brand names.

Details of the transaction were not disclosed in the original announcement.

## New York State Inks Enrichment Contract Through Year 2,000

The Atomic Energy Commission has announced the signing of an agreement to provide the Power Authority of the State of New York with approximately \$72.7 million in uranium enrichment services under the toll enrichment program.

S. R. Sapirie, Manager of Oak Ridge Operations, said the contract calls for the AEC to supply the Power Authority with enriching services through the year 2000.

Uranium provided under the agreement will be used in the fabrication of fuel elements for the Power Authority's James A. FitzPatrick Nuclear Power Plant being built near Scriba, N. Y.

The FitzPatrick Plant, scheduled to begin operation in 1973, will generate approximately 821,000 kilowatts of electricity.

To date, the AEC has signed 39 toll enrichment agreements, 12 of them with organizations in the United States and 27 with organizations abroad.

Toll enrichment, which began January 1, 1969, is an arrangement whereby privately owned uranium is enriched in Government plants. The customer furnishes uranium feed material to the AEC, pays an enriching charge, and in turn receives uranium enriched in the isotope U-235.



# Division's Central Telecommunications One Of Old-Time Unsung Heroes!!

6-14829

One of the Nuclear Division's "unsung heroes" is Central Telecommunications which until recently was hidden away in one of the unimpressive buildings in the old AEC compound. Like many other groups, this Carbide activity recently moved to new quarters in the Federal Office Building.

Actually, the precursor of the present system had its origins in 1943. Charles M. Johnson, Manager of Telecommunications, sees the system which today services the Oak Ridge facilities as a far cry from the original conglomeration of small switchboards located throughout the Oak Ridge area.

"In the early days, the Army engineers installed the original telephone setup with the main switchboard on Bell System property," Johnson explained. "When the AEC took over operations in 1946, the plant system and city system were one and the same. It was under the AEC that two separate systems — one for the city and one for the plants — were developed." It was at the time of the AEC take-over, also, that the Central Switchboard was moved from Bell System property to the AEC compound.

## Telephone 'Worries'

Johnson recalls the early days quite vividly. "I was working at K-25 in the maintenance division when I was asked to assist with the central telephone operation," he explained. "At that time the operation was headed by a retired vice president of American Telephone & Telegraph who had come to Oak Ridge to contribute to the war effort."

Once the war was over, and the AT&T vice president went back into retirement, Johnson assumed overall responsibility for the program.

Johnson recalls — perhaps a bit nostalgically — that in those early days all he had to be concerned with was telephone service. "Now we have almost every kind of sophisticated device included in our operations. Some of these include data processing assistance, devices that close doors, and even music and loudspeaker systems."

## New Techniques

One achievement of which Johnson is particularly proud is the assistance which was provided in connection with a Russian-to-



**'MANNING' THE BOARDS**—A total of 10 operators are plugged in at the giant switchboard, now answering 'Atomic Energy Commission,' after years of 'Official Operator.' From left, are Laura Narcross (wife of Tom who recently retired from Y-12); Mary Ellen Hazlett, chief operator; Kate Gresham, Polly Nichols, Areties McKamey, assistant chief

operator; Birdie Marr, who recently celebrated her silver anniversary with Union Carbide; Gladys Rawlings, Mary Ruth Stansberry, Kay Miller, and Billie Ragan. Shift work commitments prevented Margaret Imogene Cox, Alma Dodd, Wanda Jones, Jolene Reed and Ruth Teasley from appearing in the photograph.

English translation demonstration operator explained, a girl who held in connection with a science and humanities conference at Herceg-Novi, Yugoslavia. The signal from that conference traveled over 25,000 miles.

This type of activity is hardly reminiscent of the "early days." In fact, Imogene Cox, one of the original switchboard operators, recalls the problems which developed when the first public telephone was installed in Oak Ridge.

"The public telephone was located at the Central Cafeteria," she explained. "The switchboard would light up but we refused to answer. We were just too busy with official calls."

"Well, someone called Colonel Nichols (Lt. Col. Kenneth D. Nichols, Deputy Chief of the Manhattan District). The colonel called us and wanted to know why we weren't handling calls from the Central Cafeteria. We explained the situation and he agreed. So we just kept ignoring the calls from our one public telephone."

## Often Recalled

And any early-day switchboard operator can vouch for the fact that she was kept busy. As the

operator explained, a girl who couldn't handle between 300 and 400 calls an hour just wasn't any good.

As in the case today, the central switchboard was a 24-hour-a-day affair. "Sometimes we would work from 7 a.m. to midnight, only to be called back again at 3 a.m.," Imogene recalled.

In 1949, three years after the AEC had assumed responsibility for the plant system, Union Carbide was asked to undertake its operation. During the next 15 years there was a gradual upgrading of the equipment.

## FTS Came in '64

One of the most important innovations occurred in 1964 with the installation of the Federal Telecommunications System, explained Johnson. This was followed by complete automation of the system which, when originally adopted, operated on a manual basis.

Today the telecommunications system for Oak Ridge facilities rivals that of any city of 15,000—the approximate number of "customers" in the plant community. The system includes 8,500 telephones and 4,000 direct lines. The

"customers" include the facilities operated by Union Carbide, AEC headquarters, Oak Ridge Associated Universities, UT-AEC Agricultural Research Laboratory and Rust Engineering. The collection of telephone directories is the largest in the South.

The new facility in the Federal Office Building is the latest available from the Bell System that is

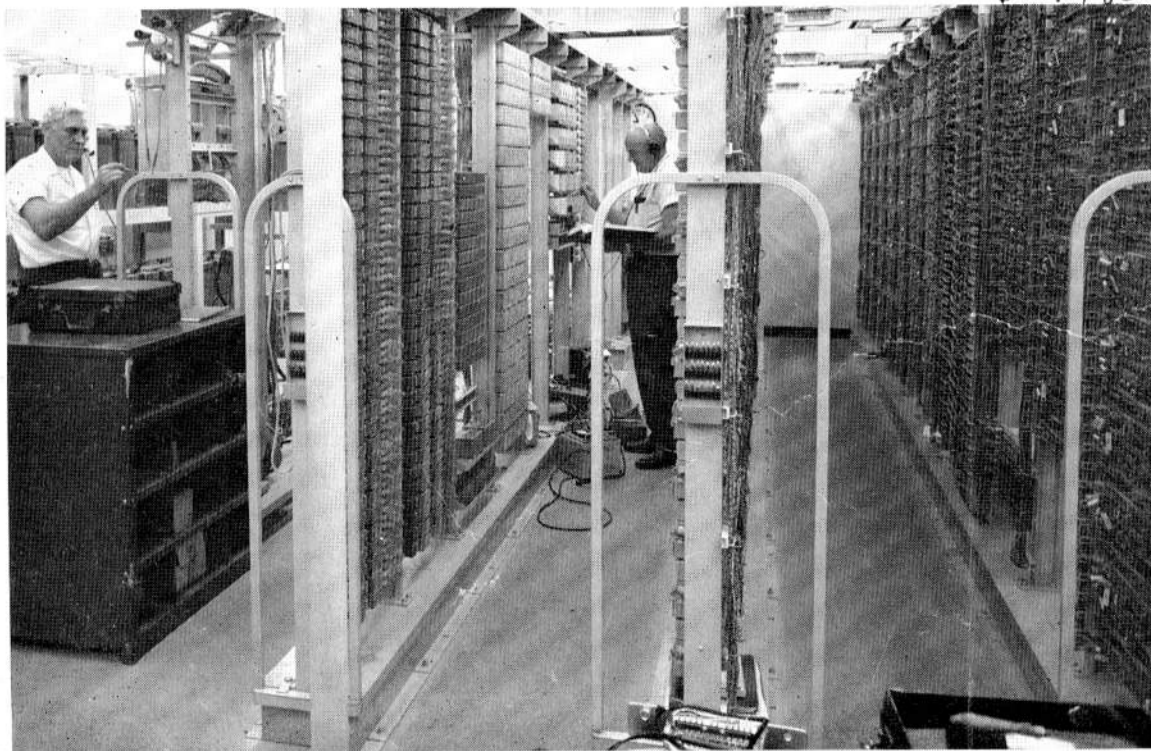
compatible with plant equipment, explained Johnson. The Central Switchboard will continue to be operated on a round-the-clock basis. However, it will never be like the "good old days" when 35 operators handled thousands of calls, both day and night. In fact, the night-time operator — there is only one — must take care of only a handful of calls.

6-14828

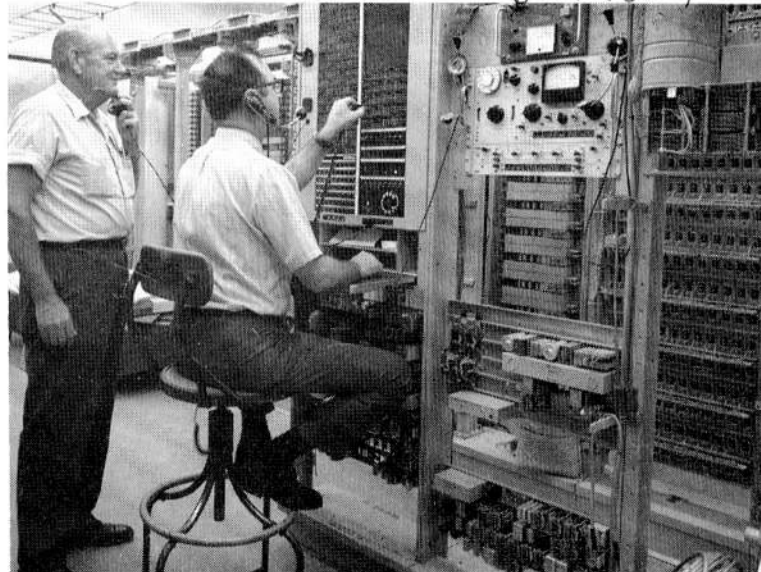


**ADMINISTERING COMMUNICATIONS** — E. S. Thompson, left, and Charles Johnson, supervisor of Telecommunications, inspect a work order for a telephone change. New installations are easier, communications folk state, naturally.

6-14827



**BELL MEN ON THE JOB**—Elmer Taylor and Noel C. Jett, both with South Central Bell, check the switches in the giant exchange which is operated on a 24-hour schedule.



**MONITORING A CALL**—Noel C. Jett, South Central Bell, and E. S. Thompson, UCC Communications, monitor a telephone call (their own) over the official exchange.



## Seven Foremen Promotions Announced

Additional promotions were announced recently in Y-12 in Dispatching, Alpha Five Assembly, Beta Four Forming, Machine Maintenance and Chemical Services.

### Bobby E. Argo

A native of McKenzie, Tenn., Bobby E. Argo came to Y-12 April 18, 1966. He had worked previously with Oak Ridge Technical Enterprises Corp. and the Clinton Power Commission in this area. He was also employed at Western Electric and General Precision, Inc. at Cape Kennedy prior to his Y-12 employment.

A veteran of the U. S. Navy, he served from 1959 until 1963.

Argo lives at 200 Alhambra, Oak Ridge. His wife is the former Beverley Ingram and they have a daughter Sloane and a son David.

Argo has been promoted to a machining foreman in Machine Maintenance.

### Ray C. Burress

Named process foreman in Beta Four Forming, Ray C. Burress is a native of Campbell County. He worked at the Valley Tool and Die Co., Dayton, Ohio; Byrd and Lowe Lumber Co., Norma; and the Miami Dickerson Steel Co., Dayton; as well as the Sanford-Day Co., Knoxville, before coming here in May of 1967.

Mrs. Burress is the former Sheldie Lee Hatfield. They live at Route 3, Oliver Springs, with their

three children, Fondia, Rhondia, and Kimberly.

### Freeman R. Castleberry

A native of Highsplint, Ky., Freeman R. Castleberry came to Y-12 January 8, 1968. He is a veteran of the U. S. Army and had worked here prior to his employment with Fairchild Engineer and Airplane Corp.; Thompson Products, Cleveland, Ohio; and General Electric, here in Oak Ridge. He served in the army from 1945 until 1947.

Castleberry lives at Route 18, Oak Ridge Highway. He has a daughter Jenny, attending Oak Ridge High School.

He was named a process foreman in Chemical Services.

### Jerry D. Culberson

An assembly foreman in Alpha Five Assembly, Jerry D. Culberson is a native of Murphy, N. C. He lives at 125 N. Hollywood Circle, Oak Ridge. Mrs. Culberson is the former Massie McNair, and they have three children, Dan, Paul and Nancy.

Prior to coming to Y-12 January 11, 1960, Culberson was self employed as a painter, and worked with the Frank Crowe Lumber Co., Creede, Colo.

He served in the U. S. Air Force from 1955 until 1958.

### Burrell A. Davis

A new production dispatching foreman in Dispatching, Burrell A. Davis was born in Lake City, where he presently resides.

He worked at the Aluminum Company of America, Alcoa, before entering the Army in 1943. After his discharge he went to work at the Oak Ridge Gaseous Diffusion Plant and worked there until 1958, when he transferred to Y-12. His continuous service date is July 2, 1946.

Mrs. Davis is the former Jeanie Bolinger and the couple has two sons, Morris and Gary.

### Amon P. Murphy

Amon P. Murphy, another recently appointed production dispatching foreman, was born in Powell, Tenn. He lives at Route 2, Harriman, near Dyllis School.

Mrs. Murphy is the former Joan Rose, and they have two sons, Jeff and Ron.

Murphy was in the U. S. Marine Corps from 1954 until 1957. Prior to entering service he worked with the A&P Stores, Oak Ridge. Before coming to Y-12 January 9, 1959, he worked with the Oak Ridge Utility District.

### Horace M. Russell

Horace M. Russell was also promoted to production dispatching foreman. He is a native of Martel, Tenn., and lives at 1506 Exeter Ave., Knoxville.

He served in the U. S. Air Force from 1941 until 1945. He worked with Southern Railway, Aluminum Company of America, and several other organizations in the Knoxville, Alcoa area before coming here December 23, 1957.

Mrs. Russell is the former Harriette L. Hicks.

### INTEREST RATES INCREASE

Interest rates on U. S. Savings Bonds have been increased six times since the first Series E Bond was sold on May 1, 1941. The current rate is 5 percent, if held to maturity, and E Bonds bought today mature in 5 years, 10 months. They earn 4.01 percent the first year; thereafter, 5.20 percent, if held to maturity.



**OUTSTANDING SAFETY RECORD**—Y-12 recently received the top safety awards of the National Safety Council, Union Carbide Corporation and the U. S. Atomic Energy Commission. Shown with the awards are, from left: J. M. Case, Y-12 Plant Superintendent; B. W. Hensley, President of the Atomic Trades and Labor Council; C. R. Lively, Vice President of Local Three, International Guards Union of America; N. A. O'Neal, Vice President of ATLC; and Clarence Johnson, head of Y-12's Safety Department.

## Y-12 Welding Paper Scheduled by Estes



Chester L. Estes

Ultrasonic welding — the use of high frequency vibrator energy to join metals—will be discussed by a Y-12 welding engineer at a national meeting next month.

C. L. Estes, Development Division, will present a paper entitled "Practical Application for the Ultrasonic Welding Process," at the Society of Manufacturing Engineers' Seminar on Welding in Chicago, Ill., September 21-22.

Y-12 has conducted ultrasonic welding tests in support of various developmental programs for the U. S. Atomic Energy Commission.

The ultrasonic welding process consists of clamping together the metals to be joined and subjecting them to ultrasonic energy which causes them to bond. The joining is thus accomplished without the use of an arc, the melting of weld materials or a cast structure usually associated with conventional welding methods.

## 'Triple-Honor' Safety Plaques On Display Throughout Plant

S. R. Sapirie, Manager of the Atomic Energy Commission's Oak Ridge Operations, in awarding Y-12 the AEC's highest safety award, pointed out that if Y-12 were an average industrial plant of its size 92, lost-time injuries and 8,300 lost workdays would have been experienced last year. (The plant completed a total of 12.5 million man hours worked with only four lost-time injuries, which resulted in a total loss of only 125 workdays.) This record took place during a period in which there was a large amount of construction and building modification.

"Because of the effort Y-12 puts into its safety programs," Sapirie pointed out, "there are 88 people happily working today who would have otherwise been disabled last year."

He recognized Y-12's management in its "great effort to indoctrinate individuals on safe working practices . . ." pointing out that, "in the final analysis, safety resides with the worker."

Y-12 has won 18 AEC awards in the past 17 years, including 10 awards of merit and eight awards of honor. "We are proud of this excellent record," Sapirie said, "as we know Union Carbide is."

In addition to the AEC Award, Y-12 also earned the National Safety Council's Award of Honor and Union Carbide Corporation's Distinguished Safety Achievement—the highest awards presented by both groups.

The handsome plaques are on display throughout the entire plant.

Y-12's management, in accepting the triple-headed awards, acknowledge the individual's role in maintaining Y-12's excellent safety performance.

"It's the individual in Y-12 that has made this fine record," Superintendent Case stated. "The awards belong to him."

## Niagara Firm Awarded Y-12 Graphite Contract

A New York firm has been awarded a contract to supply Y-12 with \$117,699 worth of graphite. The contract, awarded on the basis of competitive bids, went to Aircor Speer Electrodes and Anodes of Niagara Falls, N. Y.

Under the agreement the firm will supply an estimated 305,140 pounds of graphite of assorted sizes for general industrial uses. Deliveries will begin in September and extend through March, 1971.

### SAFETY SCOREBOARD

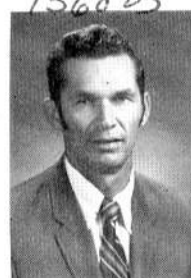
The Y-12 Plant Has  
Operated  
**236 Days Or**  
**7,513,000 Man-Hours**  
(Unofficial Estimate)  
**Through August 23**  
Without A Disabling Injury  
**SAFETY AT HOME,**  
**AT WORK, AT PLAY**



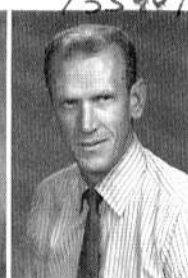
Argo



Burress



Castleberry



Culberson



Davis



Murphy



Russell





**ANOTHER 'FAMOUS ARTIST'**—B. R. Samples, Graphic Arts Section, Technical Information Services, has graduated from the Famous Artists School of Westport, Conn. He specialized in commercial art and illustration. Congratulating Samples are F. L. Clark, Graphic Arts Section Leader, left, and M. A. Broders, TIS supervisor.

## Mee-Wright Eke Out Slim Win at Southwest Point

Mee-Wright hold a slight lead in the Southwest Point Golf League, after a five-point win over Bolt-Pelfrey.

W. E. Briscoe led recent golfers with a 37 handicap tally.

League standings follow:

Team	W	L
Mee-Wright	18	6
Henderson-Stanton	17	7
Stark-Wilkey	16	8
Bolt-Pelfrey	12	12
Plemons-Roberts	12	12
Briscoe-Williams	9	15
Jones-Morgan	8	16
Boyd-Bush	4	20

## Softball Tournament Details Will Follow

The double elimination slo-pitch tournament got down to bare essentials last week, with finals slated for Friday, August 21.

Remaining in the loser's bracket were the K-25 Colts and the Y-12 Snakes. The K-25 Gashouse Gang became the glamour, upset victors in the winner's bracket.

Details on the complete tournament follow in the next edition of the News.

## Recreation



calendar

**Thursday, September 3**  
BOWLING: Classic League opens, 5:45 p.m. Ark Lanes.

**Monday, September 7**  
HOLIDAY: Labor Day, and a long weekend for Y-12ers.

**Wednesday, September 9**  
BOWLING: Mixed League opens, 8 p.m. Ark Lanes.

## World's Largest

The largest operating accelerator in the world today is located at Serpukhov, U.S.S.R., and is rated at 76 GeV. In 1971-72 the United States expects to put into operation a 200-400 GeV accelerator at the National Accelerator Laboratory at Batavia, Ill. A group of European nations, operators of European Center for Nuclear Research (CERN) on the French-Swiss border, are planning a 300 GeV accelerator.



**OVER THE TOP**—The first Y-12 department to report a 100 percent participation in the U. S. Savings bond drive, now in progress, is the Cashier and Travel department of the Materials and Services Division. From left, Gary Ellis; Cheryl Carr; J. D. Herrell, head of the group; Bobbie Watkins; Bill Mink; and Jerry Cooper. Evelyn Crouse, Frances Torbett and Carolyn Jones were not present when the photograph was made.



August, the eighth month, finds more Y-12ers crossing important thresholds with Union Carbide Corporation. Congratulations.

### 25 YEARS

**Doyle B. Williams**, Fire Department, August 21.

**Vernoy R. Sexton**, Beta Two Chemistry, August 21.

**Llewellyn Elsbree**, Utilities Administration, August 27.

**James W. Hamby**, Timekeeping, August 28.

### 20 YEARS

**Paul Abner**, Garage, August 21.

**Charles E. Helfenberger**, Research Services, August 21.

**John F. Gregory, Jr.**, Ceramics and Plastics Development, August 21.

**Nerge B. Bloomer, Jr.**, Beta Four Heavy Machine Shop, August 21.

**Harold D. Cofer**, Area Five Maintenance, August 23.

**Theodore W. Robinson**, Dimensional Inspection, August 25.

**David W. Smith**, Alpha Five Processing, August 25.

**Alford T. Wallace**, Electrical and Electronics, August 25.

**Raymond E. McNew**, Machine Maintenance, August 25.

**Benjamin F. Turnbull**, Dispatching Department, August 27.

**Ferd S. Stroupe**, Chemical Services, August 28.

**Elmer G. Crouse**, Beta Two Chemistry, August 28.

**Frank C. Winstead, Jr.**, Special Production Scheduling and Coordinating, August 28.

**Marley L. Cooper**, Guard Department, August 28.

**Rolland J. Spurling**, Electrical and Electronics, August 28.

**Robert L. Byrd**, Guard Department, August 28.

**Orren K. Sergeant**, General Shop Job Liaison, August 28.

**Benjamin F. Robinette**, Guard Department, August 28.

**Ralph J. Malone**, Process Maintenance, August 28.

**William C. Geldmeier**, Material Procurement, August 28.

**Betty D. Plemons**, Law Department, August 28.

**Charles E. Bolyard**, General Machine Shop, August 29.

**Ralph F. Graham**, A-2 Shops, 9212, August 29.

**Howard H. Pratt**, General Can Fabrication Shop, August 30.

### 15 YEARS

**Hubert J. Russell**, 9214 Rolling Department, August 21.

**Olin G. Proffitt**, Material Transfer and Packing, August 26.

**John W. Nicely**, Nondestructive Testing, August 29.

**Jacob C. Mullins**, Beta Two Chemistry, August 31.

### 10 YEARS

**Jimmy L. Murphy**, Metallurgical Development, August 22.

**Robert J. Mustin**, Assembly Operations, August 25.

**Earl K. Cottogim**, Instrument Engineering, August 29.

**Samuel H. Hart**, Special Production, Scheduling and Coordinating, August 29.

**Paul A. Williams, Jr.**, Numerical Control Engineering, August 29.

## 'Stone Mountain' Stamp Is Due on September 19

Oak Ridge's Stamp Club announces the new issue of a commemorative stamp, September 19, to honor the huge Confederate carving at Stone Mountain, Ga. (The CARBIDE WORLD recently carried an article on Union Car-



**OUTSTANDING TRAINEE**—Pvt. Charles R. Kirksey, Company B, 5th Battalion, 1st Basic Combat Training Brigade, Fort Jackson, S. C., receives a certificate designating him outstanding trainee of the completed cycle of training. He was selected for this honor in recognition of his leadership and proficiency in military instruction. A 1965 graduate of Clinton High School, Kirksey received a B.S. degree from The University of Tennessee in June. He is the son of Mr. and Mrs. Wayne W. Kirksey, Clinton. His father is in Y-12's Laboratory Operations. The certificate is presented above by Brig. Gen. W. S. Coleman, commanding general at Fort Jackson.



One car pool member wanted from Norwood area, Knoxville, to North or Central Portal, straight day. Eugene Keith, plant phone 3-5698, home phone Knoxville 689-2229.

Riders wanted from Lenoir City to any portal, straight day. Carl Manis, plant phone 3-5308, home phone Lenoir City 986-3383.

Will join car pool from 150 Algier Rd., Oak Ridge, to Biology Portal, straight day. Bill Tuominen, plant phone 3-5760, home phone Oak Ridge 483-8582.

Ride wanted from 709 West Outer Dr., Oak Ridge, to Central Portal, straight day. Brenda Suttles, plant phone 3-7213, home phone Oak Ridge 483-9874.

## J. Baker's Pressure Putt Wins Melton Hill Race!

John Baker cinched the title in the Melton Hill Golf League recently by sinking a pressure putt on the last hole. Both Baker and Jerry Babb played scratch par golf on the last day, with Babb battling out three birds.

Harold Alvey and Carl Dorr finished second in the league (Joe Pryson as a willing sub) only one point removed from the champs.

Final standings follow:

Team	W	L
Babb-Baker-Emery	56	22
Alvey-Dorr-Pryson	55	23
Tuck-Wetzel	53	25
George-Strike	50	28
Reed-J. Sherrod	46	32
Rogers-Verner	43	35
Wright-Grubb	43	35
Green-McDonald	40	38
Buxton-Crowder	39	39
Riggs-McElroy	35	43
Waldrop-Trebilcock	31	47
W. Sherrod-Wyrick	29	49
Nixdorf-Holdaway	26	52
D. Thomason-R. Thomason	0	78

## F. J. Bates, C. C. Evans Will Retire Next Monday



Bates

Evans

Two retirements occur in Y-12 next Monday as Fredric J. Bates, Buildings, Grounds and Maintenance Shops; and Charles C. "Jerry" Evans, Guard Department, retire.

Bates, with 22 years company service, came here December 24, 1947. Evans, with 27 years company service, has elected an early retirement. He came here July 1, 1943.

## Lloyd Wyatt Grabs Lead In Summer Ping Pong

Lloyd Wyatt capped the first half of the Summer league in Table Tennis, edging by Herb Mook by three points.

Wyatt came right back the next two weeks to pace the opening play of the season's second half. He defeated Joe Rich and Al King for the full three games.

Roy Huddleston kept pace with Wyatt by downing opponents Jerry Keyes and Jerry Goldstein, both for the full count.

League standings follow:

Team	W	L
Lloyd Wyatt, Y-12	6	0
Roy Huddleston, Y-12	6	0
Gordon Brewer, Y-12	4	2
Herb Mook, ORNL	3	3
Al King, Y-12	3	3
Jerry Goldstein, ORNL	2	4
Joe Rich, ORNL	0	6
Jerry Keyes, Y-12	0	6

## Rutherford-Phillips-Loupe Take South Hills Laurels

W. A. Rutherford, Dail Phillips and J. N. Loupe won the South Hills golf play-off last week, taking six points from the opponents.

Parrott-Parker-Collins place second, White-Gallman third and the Sises took fourth place.



# THE CARBIDE COURIER

Thursday, August 27, 1970

Page 3

## Uranium Control Clerk Betty R. Harvey Dies

Betty R. Harvey, senior accounting clerk in the Uranium Control Department, Operations Division, died in the Oak Ridge Hospital on August 12. She had been employed here since January, 1951. Before coming with us she had taught school in this area for five years.

Mrs. Harvey was a native of Roane County. She attended Tennessee Technological University and The University of Tennessee. Mrs. Harvey is survived by her husband, W. M. (Mack) Harvey, who is employed as a maintenance mechanic in the Mechanical Safety Department. The Harvey residence is on Gallaher Road, a short distance from the plant. Other survivors include Mrs. Harvey's mother, Mrs. Molly Claiborne of Kingston, three brothers and three sisters.

## K-25 Paper Set

J. R. Merriman, Process Systems Development Department, Gaseous Diffusion Development Division, will present a paper at the 11th AEC Air Cleaning Conference to be held in Richland, Wash., August 31-September 3. The title of the paper is "Removal of Radioactive Krypton and Xenon from Contaminated Off-Gas Streams." M. J. Stephenson, one of the co-authors, will also participate in the conference. Other co-authors of the paper are J. H. Pashley and D. I. Dunthorn.

## THE CARBIDE COURIER

Published Biweekly  
Editor ..... H. J. Mayberry  
K-1002 Building, Tel. 3-3097



**GRADUATION AT ORGDP**—Henry Hendrickson and B. J. Watson were presented plaques in recognition of their having satisfactorily completed the Operator Training Course covers 15 months of classroom and on-the-job training in the skills required to operate the many kinds of equipment which make up the Gaseous Diffusion Uranium Isotope Separating Process. Making the presentation at left is R. H. Dyer, Cascade Operations Department Head; Hendrickson; Watson; and L. J. Davis, training coordinator. Hendrickson lives in Oak Ridge, Watson in Kingston.

## Machine Shop Names Sumner to New Position

H. T. Sumner has been recently promoted to planner and estimator in the Machine Shop of the Fabrication and Maintenance Division. He has been employed at K-25 as a machinist since October, 1961. He came with us from the General Electric Company in Cincinnati, Ohio.

Sumner was born in Jellico, Tenn., and attended public schools in Cincinnati and the Ohio Mechanics Institute, also in Cincinnati. Mrs. Sumner is the former Phyllis Ann Creech from Hamilton, Ohio. They have three sons at home at 292 Illinois Ave., Oak Ridge; Tommy, 10, Donald, 8, and David 6. The Sumner's outside interests include camping and swimming.



**H. T. Sumner**  
Planner and Estimator

## Barker, Johnson, Strickland, Wyrick And McClanahan Will Retire August 31

Five ORGDP employees will retire at the end of August. N. D. Barker, C. C. Johnson, W. M. Strickland, and N. E. Wyrick have reached normal retirement age, and J. E. McClanahan has elected early retirement.

### N. D. Barker

Newell D. Barker is a safety analyst in the Safety, Health Physics and Industrial Hygiene Department, Industrial Relations Division. He has been at ORGDP since April, 1947, coming from working for Tennessee Eastman at Y-12. Before coming to Oak Ridge, he worked for the U. S. Steel Corporation.

Barker was born in Whitwell, Tenn. He attended public schools in Jasper, Tenn., and has taken special courses from International Correspondence Schools and The University of Tennessee. Mrs. Barker is the former Thelma Dalph of London, Ky. They have a son, James A. Barker, who is Associate Director of the Personnel Division at ORNL.

Barker plans to sell real estate in Oak Ridge on a part-time basis following his retirement. His outside interests and hobbies are golf and fishing. The Barkers live at 145 Orchard Lane. Barker said, "I have enjoyed working at ORGDP and will miss my many friends that I have been associated with."

### C. C. Johnson

Clifford C. Johnson is a machinist in the Machine Shop Department, Fabrication and Maintenance Division. He has been employed here since January, 1962, after working at the Newport News Ship Yards.

Johnson was born near Centerville, Ala., and attended public schools in Bessemer, Ala. Mr. and Mrs. Johnson have two children: a son, W. C. Johnson, who works in Hueytown, Ala.; and a daughter, Barbara Ann Waldrup, who resides in Oklahoma City.

The Johnsons have been living at 106 Pelham Road but plan to move to a home on the St. Johns River in Florida. Johnson plans on fishing, boating, and working in his yard. He says, "I have enjoyed working at Carbide and hate to leave my friends. I hope they will visit me in Florida."

### J. E. McClanahan

Jesse E. McClanahan is a power sweeper operator in the Janitors Department of the Fabrication and Maintenance Division. He has been employed here since December, 1945. Prior to coming with us he had worked for Stone and Webster.

McClanahan is a native of and attended schools in Columbiana, Ala. He is married to the former Mable Caddell and they have a son, Jesse Caddell McClanahan. They live at 302 South Benedict Ave., Oak Ridge.

McClanahan is a baseball enthusiast and plans to devote a lot more time to his favorite sport.

### W. M. Strickland

William M. Strickland is an instrument mechanic in the Instrument Fabrication Department, Fabrication and Maintenance Division.



**Barker**

**Johnson**



**McClanahan**

**Wyrick**



**Strickland**

vision. His continuous service date is February 13, 1945. Before his employment here, he worked for Ford, Bacon, and Davis, and prior to that he operated his own radio repair shop in Robbins, Tenn.

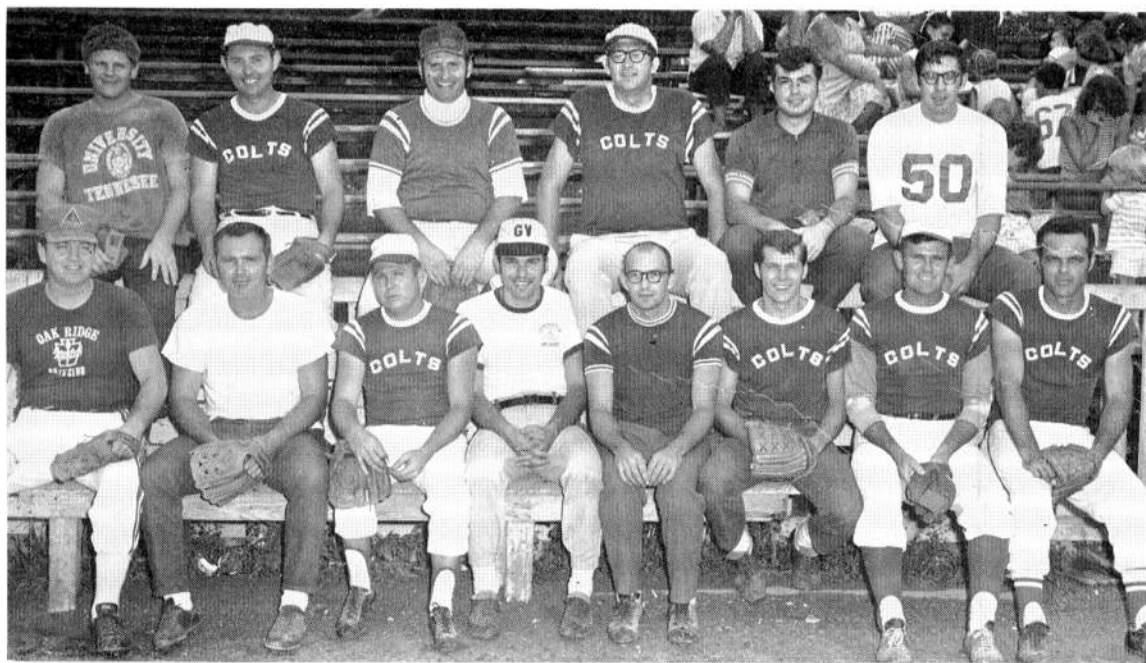
Strickland was born in Rockwood and attended public schools in Robbins. He has taken correspondence courses from LaSalle Extension University in Chicago and from the National Radio Institute in Washington, D. C. He is married to the former Callie Hartley Riseden. They have a son, William Morgan Strickland, Jr., and three daughters, Betty Joyce, Elizabeth Ann, and Wilma. The Stricklands live in the Pond Grove Community, Route 3, Rockwood.

### N. E. Wyrick

Nelce E. Wyrick has been maintenance mechanic in the Fabrication Shops of the Fabrication and Maintenance Division. He was first employed at K-25 by Ford, Bacon, and Davis in July, 1944. Before coming to Oak Ridge, he was employed by the American Thread Company in Dalton, Ga.

Wyrick is a native of Roane County and attended Kingston schools. He is a widower. Wyrick lives at 446 Kingwood Street, Kingston. He stated that he had been too busy for the past several years to fish or hunt, but now he plans to do some of both. He is also considering going into the upholstery business to occupy his time and make some extra money, and he enjoys this type of work.

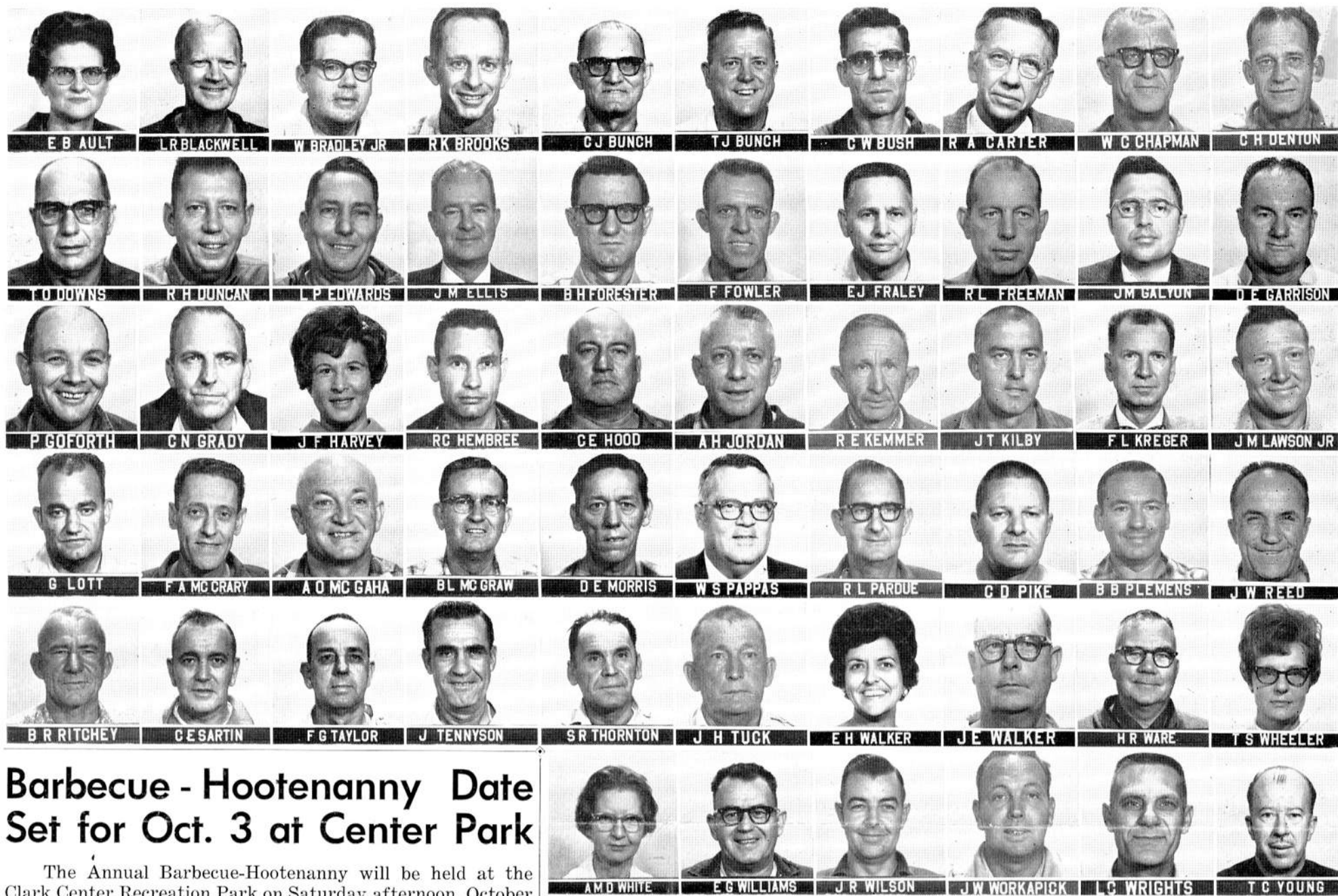
Wyrick stated that he has certainly enjoyed working at K-25, that he had made many fine friends here and will miss them. He hopes that his friends will find time to stop by and see him after he retires.



**LEAGUE CHAMPIONS**—K-25's Colts won the Y-12 - K-25 slow-pitch league recently. Left to right in the first row are Jack Cornett, Bob Seyfried, Jerry Howard, West Peters, Ted Hatcher, Jim Adams, Sam Woodfin and Sam Duncan. In the second row are Mike Mitchel, Steve Cates, Jim Shoemaker, Jim Treadwell, Tony Angelelli and Bill McLendon. Not pictured are Butch Loy, Baldy Clayton, Don Tidwell and Harold Cornett.



# These Employees Reach 25 Years Service This Month



## Barbecue - Hootenanny Date Set for Oct. 3 at Center Park

The Annual Barbecue-Hootenanny will be held at the Clark Center Recreation Park on Saturday afternoon, October 3.

The Barbecue date is always set on the long days-off weekend for C. H. McIntyre and his crew of A Shift super-barbecuers who donate their time, starting the night before, cooking, basting, and turning the meat over a slow bed of coals all night long.

In addition to the barbecue, the meal will consist of wieners, baked beans, cole slaw, potato chips, pickles, and cookies.

Fred Johnsson will lead the Hootenanny Sing-Along.

The price of the tickets will be the same as last year—\$1.50 for adults, 75c for children 12 and under. This price includes everything—food and drinks. The ticket sale will close on September 28, to allow the committee enough time to order the proper amount of food.

Tickets may be obtained from all divisional secretaries starting September 8, the day after Labor Day.

### Lab Notes

Ronnie H. Beck, an instrument mechanic has transferred from the Fabrication and Maintenance Division to the Isotope Analysis Department. Ronnie had been in maintenance since 1964. He lives in Coalfield, with his wife, Linda, and daughter, Rhonda.

\*\*\*

W. S. Pappas, Chemical Analysis Department, and his wife Betty are the parents of twins born recently. John David weighed six lb., 14 oz., and Lisa Leanne weighed six lb., 9½ oz.

10 Years' Service	
W. J. Grunst	8-15-60
E. W. Canipe	8-29-60
J. S. Quarles	8-31-60

### McMahan - Tuggle Take Laurels in Golf League

Bill McMahan and Joe Tuggle came out the winners of the K-25 SS Golf League played at the Lakeside Course this past season. Individual honors are: Frank Gethers, low net score for season (28); Ed Ingram, most improved golfer; Bill McMahan, low average for season (40); and Bob Schilling, outstanding shot of the season (an eagle on hole No. 9).

#### Final Standings

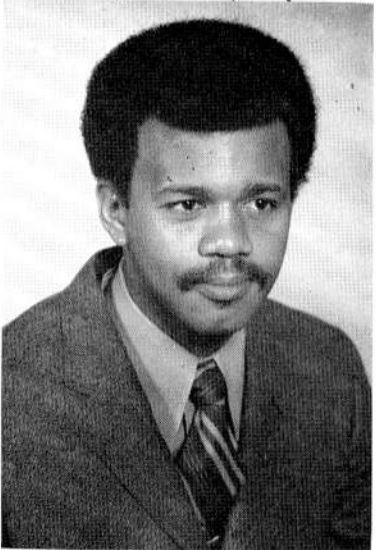
McMahan, Tuggle	37.5
Bradley, Hensley, Ingram, McGill	31.5
Mathis, Nunley, Schilling	23.5
Blankinship, Meyers, Nier	23.5
Fourman, O'Kain, Wavrik, Wise	24
Simpson, Wendolkowski	20
Douglass, Powell	13.5
Davis, Eckert, Gethers	11.5

## Jennings Earns Academic Fellowship Toward Ph.D. in Math at Buffalo

Bobby Lee Jennings, who works in the System Modeling Section, Applied Science Department of the Computing Technology Center, has been awarded an academic fellowship by the State University of New York at Buffalo to work toward a Ph.D. degree in mathematics. The fellowship was granted as a result of one of his college professors submitting his name and credentials to the university for review.

State University offers various fellowships each year and many schools send in names of applicants. The scholarship is for four years. However, Jennings feels that he can complete his degree in less time because he has already taken some of the required courses in graduate work at UT. The approximate value of this scholarship is \$24,000.

Jennings has been employed by Union Carbide since October, 1968. Prior to that he worked for Service Bureau in Atlanta, Ga., as a programmer. He was born in Huntsville, Ala., and attended public schools in Knoxville. He received a bachelor's degree in mathematics from Knoxville College in May, 1968. He is married to the former Marion A. Watson of Knoxville and they have one son. The Jennings live at 2054 Dandridge Ave., Knoxville.



### SAFETY SCOREBOARD

OUR PLANT  
Has Operated  
**980,000 Safe Hours  
Through August 20**  
Since last disabling injury on June 11



Carpool member wanted from Hillside-Pennsylvania area, 7:45 to 4:15. Contact Chuck Brockwell, 3-3576, home, 483-9811.

## Bowlers, Teams Needed To Fill Schedule for Fall

Both men's bowling leagues have room for at least one additional five-man team. One league bowls at 8 p.m. each Tuesday, the other bowls on Wednesdays at 5:45 p.m. Both leagues bowl at the Ark Lanes, Downtown, Oak Ridge.

There is also room for additional four-man teams in the Carbide league that bowls at 6:30 p.m. Thursday at the Brunswick Starlite Lanes on Oak Ridge Highway in Knoxville.

Teams or individuals wanting to bowl may contact the Recreation Office, phone 3-3097.

Better be dead sure than sure dead.

20 Years' Service	
J. T. Stanley	8-03-50
D. H. Fuller	8-03-50
K. I. Gresham	8-25-50

15 Years' Service	
A. J. May	8-08-55
J. M. Bender	8-17-55
J. G. Cooke	8-29-55
E. A. Farmer	8-31-55

A careless man heeds no counsel.



# 'MAGIC' Formula Gives Information On Myriad of Machining Problems Here

By M. L. SHELL and R. L. WESLEY

Did you ever wonder how many times during the thousands of years of unrecorded history man invented and re-invented the wheel before someone scribbled the fabrication details on the wall of a cave?

Indeed, how many times has a fabrication technique been conceived in a modern machine shop and then forgotten because the details were never recorded, or worse, followed the inventor out the door when he retired?

While one might surmise that the more significant inventions usually find their way to the U. S. Patent Office, many unique applications or inventions often die when a given project is completed.

Several years ago Oak Ridge Y-12 Plant management and U. S. Atomic Energy Commission officials decided to attack the problem of duplicated effort in the machining and gaging work conducted in the AEC production plants. Preliminary investigations indicated that many technologies had never been reported and those that had been recorded were widely scattered and lacked a common depository.

## Reduce Duplicity

In late 1965, the Y-12 Plant received permission from the AEC to begin a pilot program for an information center that would attempt to solve some of the aforementioned problems. Administrative responsibility of the program originally was assigned to the Y-12 Development Division. The program was named Machining and Gaging Information Center (MAGIC).

During the crucial trial years of 1966-67, many man-hours were spent collecting, recording and disseminating information. The experience confirmed the original assertion that such a center could significantly reduce duplicated effort and provide a valuable service to AEC plants.

Besides reducing duplicated efforts, experience gained through the pilot program proved that MAGIC could expose important information that might otherwise have remained unknown and reduce time spent searching for information by answering specific inquiries, conducting literature searches and providing other information services as follows: distill information through analysis and evaluation to eliminate the obsolete, redundant, erroneous and sales-oriented data; prepare state-of-the-art reports which present information in full perspective rather than in fragmented parts; spin off unclassified technology to private industry.

## Services Expand

When the center was elevated to full information center status in January, 1968, administrative responsibilities were assigned to the Technical Information Services Department, Classification and Information Division. Since that time, center personnel have stored in retrievable form over 6,000 information entries pertaining to the high accuracy, close tolerance aspects of machining and gaging and have answered more than 3,000 requests for information contained in documents, 356 of which required in-depth research and analysis.

Since the early days of the center, MAGIC has grown in personnel strength from two to four and has taken on new responsibilities and implemented programs that were but remote future goals during the pilot program stage.

The Center currently publishes on a regular basis **Machining and Gaging Notes** — short, concise descriptions of unique equipment, applications of conventional equipment and/or new methods and processes developed in the AEC complex — and the **Publication Announcement Bulletin** which is published every two weeks to announce the availability of selected current literature on machining and dimensional measurement.

## Subjects Will Vary

A typical day for MAGIC personnel may involve answering inquiries from throughout the AEC production plant complex, scanning pertinent technical reports, society papers, trade journals and books for pertinent information, or writing a report on a Y-12 Plant technology or innovation.

Information selected for input into the MAGIC data base is limited to the following subject categories: conventional "chip formation" machining, conventional "abrasive" machining, special metal removal processes, machinability and grindability, dimensional measurement, fixed gaging, machine tools, measuring equipment, machine components, control systems, tooling, facilities and installation, machine systems, cutting tools, specifications, numerical control programming and software, maintenance of machines and equipment, management of machines and equipment and machine testing evaluation.

Currently located in Room 33, Building 9212, the center is planning to move to new quarters in Building 9766 around the first of the year.

## 'Critical Moment' New Film from AEC Library

A film which depicts part of the Atomic Energy Commission's efforts to develop nuclear power plants that will produce more fuel than they consume is now available for loan. The 16-mm color film is entitled "In Search of a Critical Moment," and was produced by the AEC's Argonne National Laboratory, near Chicago.

The film explains the construction and operation of the Zero Power Plutonium Reactor—a test reactor designed to supply information essential to the development of economic fast breeder central station nuclear power plants.

Although most current reactors "burn" uranium, the trend is toward the fast breeder reactors that will "breed" more nuclear fuel (plutonium) than they consume, thus dramatically increasing the world's supply of fissionable material.



**MAGIC CONFERENCE**—MAGIC Director A. M. Read, center, confers with Assistant M. L. Shell, left, and R. A. Davis before preparing a technical report on a Y-12 tooling innovation.

# 'Gold-Salting' Coastal Waters Assists in AEC's Tide Research

The Atomic Energy Commission, participating with the Corps of Engineers, is salting some of the nation's coastal waters with gold to obtain data which can be used in the solution of engineering problems related to maintaining coasts, beaches, harbors, and waterways.

"But the project is not expected to precipitate a gold rush," according to Eugene E. Fowler, director of the AEC's Division of Isotopes Development. He explains that only a minute amount of gold per quart of sand is enough to enable scientists to study more than a half million square feet of coastal water sediments.

Fowler explains that the AEC program may lead to a method whereby man can combat the capriciousness of ocean currents and wave energy along coasts. "These currents and wave energy have always troubled man," he said. "Beaches and sand bars disappear and reappear, constant dredging is required to maintain many ship channels and harbors, and beach erosion is a constant threat to recreation areas."

The investigation is named RIST for Radioisotopic Sand Tracer Studies. A quart of sand is "tagged" with a minute amount of radioactive gold-198 or gold-199, both of which are biologically inactive. The gold-tagged sand is placed just off-shore and is then traced for a number of days along the coast for distances in excess of 3,000 feet and more than 1,500 feet from the shore line.

Surveys from a single injection of gold-tagged sand may continue for a week before decay and dilution make radiation undetectable with even the most sensitive radiation detectors. The AEC-developed survey system is unique in its ability to measure over 3,000 sample points in a two-hour period as the underwater detector vehicle moves over the bottom of the ocean. From data obtained in this manner maps are drawn that show the pattern of sand

movement along the coast, and can be used as a guide in marine engineering for harbors, breakwaters, and beach protection structures.

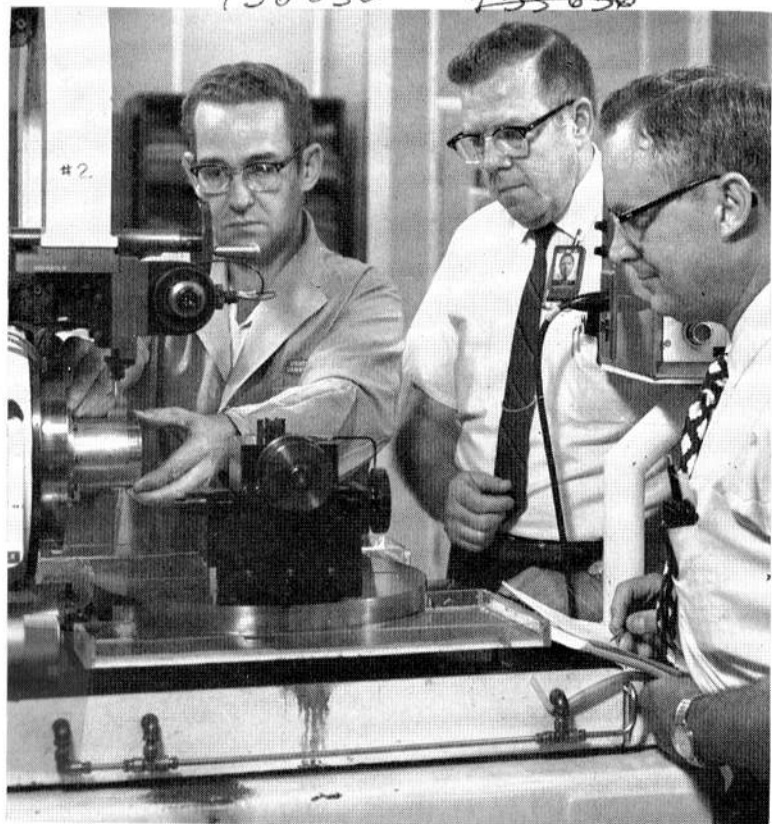
Studies are being conducted at Point Mugu, Point Conception, and Oceanside Harbor, all in California, and investigations will be expanded in the near future to include Masonboro Inlet along the outer banks of North Carolina and some of the coastal areas of the Great Lakes.

Fowler explains that the RIST studies are developing data on paths of transportation of material along a straight coast line in the vicinity of headlands or engineering structure barriers, particularly the characteristics of sediment movement in the near-shore and offshore zones. Other topics of study include seasonal changes in rate, direction, and distance of coastal transport; average velocity of transport along a straight beach and around a headland; and the fundamental mechanics of sediment transport. RIST also has as an objective the development of equipment and methods for measuring the volume rate of sand transport.

A number of agencies are participating in the AEC program, including Oak Ridge National Laboratory, the Corps of Engineers Coastal Engineering Research Center, Washington, D. C., and a number of Corps districts, as well as the Air Force, Navy, NASA, the State of California, and the U. S. Army Mobility Engineering Research and Development Command.

## Reimann Fires Highest High Power Rifle Score

George Reimann, ORNL, won the fourth match of the All Carbide High Power Rifle League with a fine 478 out of 500. Y-12's Jack Huff was second with 475 while Jack Mrochek, ORNL, placed third with 462.



**FIRST-HAND INFORMATION**—Field interviews to obtain first-hand reports on machine tool performance comprise an important part of the Machining and Gaging Information Center's (MAGIC) program. Such interviews enable valuable information on new techniques or equipment to be shared throughout Y-12 and other AEC production plants. MAGIC Director A. M. Read interviews D. T. Chambers, left, and J. S. Hurst at a precision turning machine.



## Myth of 'Period' Privileges

By T. A. LINCOLN, M.D.

As women prepare to enjoy their equal status with men (maybe even protected by a constitutional amendment), both might consider the "privileges" sometimes associated with a menstrual period.

Although the number of women who claim disability during the first one or two days of a menstrual period has diminished appreciably during the past 25 years, it still is a common cause of absence from school and work. Part of the decline is probably the result of a change in attitudes, but the widespread use of the "pill" has also had a profound effect.



Dr. Lincoln

Various studies have found that 3 to 10 percent of young women regularly miss work or school because of dysmenorrhea. In one study of 4,000 women questioned during their first pregnancy, 17.5 percent reported that they regularly had severe pain and 7.7 percent disabling pain during the first part of their menstrual period. In this study the author concluded that, on the average, every

thirteenth woman who never had a baby and was under the age of 30 was disabled 13 days each year. Remember these absences were due to normal physiology and could not be considered an illness in the usual sense. Although secondary dysmenorrhea may be caused by organic pelvic disease, most cases of dysmenorrhea are primary and no lesions in the pelvic organ can be found. There is also no evidence of contributing disease in any other part of the body.

### No Complete Understanding

The cause of dysmenorrhea still is not completely understood; apparently it is caused by a hypercontractility of the uterine muscle. A menstrual stimulant in the lining of the uterus is released and absorbed at the start of the period. When ovulation is prevented by taking contraceptive pills, the period which a woman has after she stops taking the pill is usually relatively painless.

Recently, Dr. Edgar Berman resigned from the committee on national priorities of the Democratic Party after a clash with feminists, particularly Rep. Patsy Mink of Hawaii. He had been indiscreet enough to suggest that the menstrual cycle or the menopause might disqualify women for executive responsibility.

Some women get tense and irritable during the premenstrual period. Whether their judgment is affected significantly is doubtful. If they regularly were disabled from work for one to two days each month, had poor judgment or mood swings, they probably would be eliminated from competition long before they reached a position of great responsibility.

### Both Sexes Vulnerable

Of course, both men and women get headaches, particularly migraine, which may disable them temporarily. Both sexes are vulnerable to various psychophysiological disturbances such as nervous indigestion or spastic colitis, but dysmenorrhea belongs exclusively to women.

So what about the majority of women who are not disabled? Are their other physical or psychological functions adequate? The answer, at least as far as vigorous sports are concerned, appears to be a resounding "yes." Certainly competitive sports test judgment and reaction time in addition to speed, strength and agility.

Dr. Daniel Hanley of Bowdoin College, and Miss Ann Martin of the Mayo Clinic, questioned most of the members of the United States Olympic team about their menstrual histories before the 1964 Olympics. Later, they compared the performances with the stage in their menstrual cycle. They found that women could establish new records during all phases of the menstrual cycle. In another study, about 15 percent did generally better during a menstrual period and especially better than during the one or two days before the onset of menstruation.

### No Special Privileges

There is no reason for a gym teacher to excuse a girl from sports during a menstrual period. Girls can even swim during a period by using tampons. An interesting study at the

## FIT Program

(Continued from Page 1)

cycle, bringing the overall total of FIT trainees for the year to about 80.

The Paducah Gaseous Diffusion Plant conducts the FIT Program in cooperation with federal, Kentucky state, and educational resources. The program is supported by the U. S. Department of Labor through an interagency agreement with the Atomic Energy Commission.

### Carbide Supplies Teachers

In the cooperative effort, the AEC administers the federal contractual aspects of the project and also furnishes facilities and equipment; Murray State University provides guidance, counseling, communication and remedial instruction, testing, and evaluation services; and Union Carbide's Paducah Plant provides an experienced group of engineers, industrial supervisors, technicians, and skilled craftsmen to meet training requirements.

In addition, West Kentucky Area Vocational School provides instructional assistance, and the Kentucky Economic Security Commission provides a number of services connected with recruiting, administration, and placement.

## Annual E-T Horse Show Scheduled September 19

Several Nuclear Division employees are busy arranging for the East Tennessee Riding Club and Horse Show, set for Saturday, September 19.

Featured in the 22nd show will be ponies, registered quarter horses, Arabians and Appaloosas. The show will be opened by a rider in authentic Arab costume on a registered Arabian stallion.

Set at the show grounds on Tuskegee Ave., less than one-half mile from South Illinois Ave., the show will open at 10 a.m. and last until late afternoon.

A chicken dinner plate will be served for \$1.

Children under six, accompanied by adults, will be admitted free of charge.

University of Illinois showed quite convincingly that water does not enter the vagina during swimming or bathing, even in the last weeks of pregnancy or during the first three days after the normal delivery of a child.

So girls, you shouldn't need to excuse yourself from any physical activity just because you are a woman and particularly a menstruating woman. Sports injuries to the genitalia or reproductive organs in women are extremely rare, but are not uncommon in men. If you doubt that the ovaries and uterus are protected, try a little experiment. Put a raw egg, without shell, in a mason jar, fill to the brim with water and then cover tightly. See if you can break the yolk by shaking the jar. You will find that you can't. The internal viscera are suspended in a liquid in a similar fashion and are protected from shaking and jolting.

Executive responsibility for women probably comes from being able to compete successfully with men at their own game. Those women who are aggressive and talented enough to succeed certainly don't miss work or shun responsibility because of a menstrual period.

If women truly desire equality, they will have to recognize that a menstrual period confers no special privileges.

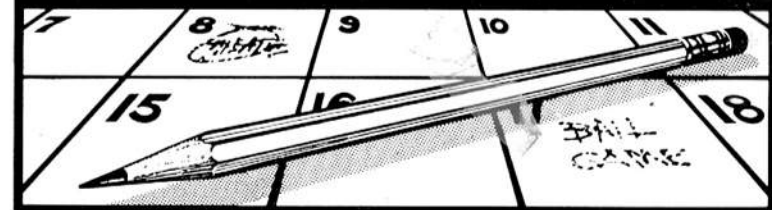


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## CALENDAR OF EVENTS



### TECHNICAL

August 27

ORNL Environmental Study Lunch Hour Film Festival: "Multiply and Subdue the Earth," Isotopes Auditorium, Building 3047, 12 noon. (You may bring your lunch.)

August 28

Physics Division Seminar: "The Spin-Orbit Coupling with Semi-Infinite Nuclear Matter," G. Süßmann, University of Munich, East Auditorium, Building 4500N, 3 p.m.

August 31-

September 4

Conference on Dynamics of

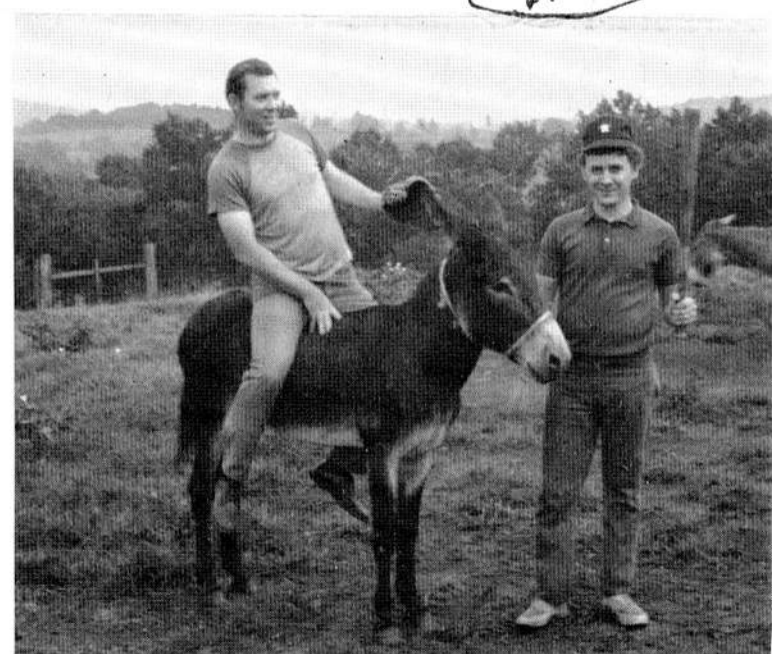
Molecular Collisions, Alexander Motor Inn, Oak Ridge.

September 1

ORAU Medical Division Staff Seminar: "General Principles of Protein Binding Tests," Irving Glover, Main Conference Room, ORAU Medical Division, 4 p.m.

September 3

Biology Division Lecture Series: "New Data on the Ontogeny of Web-Building Behavior in Spiders," Peter Witt, Division of Research, North Carolina Department of Mental Health, Large Conference Room, Building 9207, 3 p.m.



**HOME RUN HOMER**—Marvin McCarty, ORGDP, seated, and Y-12er Emmett Walker attempt to get the burro going after a long base hit. The Jaycee-sponsored donkey baseball game will take place Saturday, 8 p.m., August 29, at the field directly behind the Skyway Theatre.

### For Community Services

## Jaycees Sponsor 'Donkey Ball'

Want to have fun, treat the youngsters, and support some worthy causes at the same time?

Plan on attending the Oak Ridge Jaycee-sponsored "Donkey Baseball" game Saturday, August 29, 8 p.m., at Ridgeview Park, just behind the Skyway Theater on Tuskegee Road. Gates open at 7 p.m.

Proceeds from the event will go to support Jaycee activities for the Boys' Club, a special scholarship fund, and other community services.

According to Bill Williams, Jaycee coordinator for the event, the

game will be played by Oak Ridge community leaders riding donkeys. "Oak Ridge hasn't had a donkey baseball game in a number of years," Williams says, and the event "should be funnier than a circus — something the youngsters will really enjoy."

Tickets are on sale now at the Diplomat Motel and the Alexander Motor Inn or from any Oak Ridge Jaycee. "Pregate prices" are \$1 for adults and 50 cents for youngsters under 15 if purchased before game time. Children under 6 are admitted free. Tickets at the gate will be 25 cents higher.